

be painted and dried well if yellow colour is to be used, where these bees are known to exist.

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26. ECOLOGICAL NOTES ON THE INDIAN FRESHWATER MICROTURBELLARIA: *MESOSTOMA* SP.

While the taxonomy and distributional ecology of the freshwater and land planarians (Triclad turbellarians) of India have been studied in some detail by Whitehouse (1913, 1914, 1919), Kawakatsu (1969), Kawakatsu & Basil (1971), the freshwater microturbellarians are meagrely known. The purpose of this short paper is to present the results of an ecological investigation into the occurrence of *Mesostoma* species in the vicinity of Madurai in south India. The material was obtained by us from several localities during the course of the collection of freshwater planarians described in a previous paper (cf. Kawakatsu & Basil 1971, pp. 41-42).

Order NEORHABDOCOELA
Suborder Typhloplanoida
Family MESOSTOMIDAE
Genus *MESOSTOMA* Ehrenberg 1936

***Mesostoma* sp.**

External Features: A small and oval-shaped species. Live animals c. 2 mm in length and 1 mm in width. The body shows a green coloration. Pharynx is located near the anterior end of the body.

Localities I and II:

The animals were obtained from two temporary granite quarry pools located in front of the buildings of Madurai University, Palkalai Nagar Campus (about 13 km west of the city of Madurai). Both pools have elevated boundary and are exposed to sunlight. The pools are irregular in shape (Loc. I, 345 cm × 148 cm; Loc. II, 223 cm × 195 cm) and contain muddy, greenish water due to the presence of freshwater green algae. The first pool has a depth of c. 18 cm at its centre (average depth of 15 cm) and the second pool has a depth of c. 12 cm at its centre (average depth 8 cm). The bottom of the pools is muddy and without any large aquatic plants. At the time of the collection of the animals (July 1973) the pools were almost dry. The animals were present only at the edges of the pools.

TABLE
RESULTS OF PHYSICO-CHEMICAL ANALYSIS OF WATER FROM THREE LOCALITIES

Date	Time	Air Temp.	Temperature (°C) Water temp.	pH	Trans- parency (cm)	Dissolved oxygen (mg/l)	Carbon dioxide (mg/l)	Alkalinity ppm (CaCO ₃)
Locality I								
21-vii-'73	9.40 (Sunlight clear)	35.0	32.0	7.8	Nil	7.52	7.92	394
	12.40 (Sunlight clear)	39.5	40.0	8.2	Nil	14.35	1.98	390
	15.40 (Cloudy and breezy)	31.5	33.5	8.1	Nil	2.57	2.64	310
Locality II								
21-vii-'73	9.50 (Sunlight clear)	36.0	33.5	7.9	Nil	7.52	5.28	348
	12.50 (Sunlight clear)	39.5	41.0	8.0	Nil	2.92	4.62	262
	15.50 (Cloudy and breezy)	29.5	31.8	8.2	Nil	1.53	3.52	250
Locality III								
25-vii-'73	10.00 (Sunlight clear)	35.0	30.0	8.6	33	7.90	0.792	152

The data of the physico-chemical analysis of water taken from the pools I and II are given in the Table. The samples of water were taken from 9.40 to 15.50 hrs at 3 hour intervals. It will be seen from the table that the water temperature of the pools was extremely high and that of the edge area is less than in the centre of the pools. This may be due to constant movement of the shore water by wind action. It is highly probable that this slightly lower temperature may be the reason for the animals congregating at the edge of the pools.

Dead bodies of other aquatic small organisms at the edges of the pools were found to be completely covered by the *Mesostoma* microturbellarian. Laboratory observations showed that the specimens of *Mesostoma* species were attracted towards the flesh of aquatic organisms (such as fish, tadpole and mosquito larvae) and have a habit of completely surrounding the small bits of tissues and feeding on it.

Locality III:

The third pool had comparatively more water than the two pools described above (Localities I and II). This pool located near the localities I and II, is also a granite quarry pool and is similarly exposed to sunlight. The irregular shaped pool (630 cm \times 320 cm) contains clearer water with a depth of about 39 cm at its centre and a muddy bottom. The animals were found all over the pool.

The physico-chemical conduction of the water of this pool was observed only at 10.00 hrs (Table). The water temperature of the pool was same in all parts of the pool (30°C).

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27. OCCURRENCE OF *OPHIOGLOSSUM FIBROSUM* SCHUM. AT JUNAGADH IN SAURASHTRA

A few species of *Ophioglossum* have been recorded by Blatter and d'Almeida' from Bombay Presidency.

Recently we obtained *Ophioglossum fibrosum* Schum. growing wild along the foot of the Girnar hills in open areas with grass and small herbs during 1st and 2nd week of July and lasts till September. In October only stray plants are available. Fertile spikes mature during August and September. Each plant has 2-3 fertile leaves on a broadly conical corm having many root fibres. The height of the plants from corm to the top of the fertile segment is from 2 to 3.5 cm.

The species is recorded for the first time from Junagadh as well as from Saurashtra. The specimen is deposited in the herbarium, No. 1250, in Biology Dept. of Bahauddin College, Junagadh.

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28. THE STATUS OF GENUS *PHAULANTHUS* RIDLEY (MELASTOMATACEAE)

The genus *Phaulanthus* Ridl. is reduced to a synonym of *Anerinacleistus* Korth. Following are the new combinations: *Anerinacleistus acuminatissimus* (Ridl.) Nayar, *Anerinacleistus rudis* (Ridl.) Nayar, *Anerinacleistus brevidens* (Craib) Nayar, *Anerinacleistus pedunculatus* (Craib) Nayar.

Korthals (1840-44) established the genus *Anerinacleistus* on the basis *Anerinacleistus hirsutus* from G. Malintang, Sumatra. Naudin (1851) and Miquel (1855) accepted Korthal's generic conception of *Anerin-*